Claims

1. A radial piston pump for generating high fuel pressure in fuel injection systems of internal combustion engines, in particular in a common rail injection system, having a driveshaft, supported in a housing, that has an eccentrically embodied shaft portion which cooperates with preferably a plurality of pistons capable of reciprocating radially, relative to the driveshaft, in a respective element bore, in order to aspirate fuel and subject it to high pressure in a high-pressure region, characterized in that in the outer jacket face (3) of the pistons and/or the inner jacket face (20) of the element bore, a structure in the µm range is formed.

2. The radial piston pump of claim 1, characterized in that the structure is embodied such that in operation there is no direct communication between the high-pressure region (1), defined by one face end of the respective piston, and a low-pressure region (2), defined by the other face end.

3. The radial piston pump of one of the foregoing claims, characterized in that the structure is formed by lubrication conduits (4-8), which extend substantially in the circumferential direction.

4. The radial piston pump of claim 1 or 2, characterized in that the structure is formed by lubrication conduits (9-18), disposed in pairs, each of a different length, which each have arms oriented perpendicular to one another, with one arm disposed in the axial direction and the other arm in the circumferential direction of the respective jacket face.

5. The radial piston pump of claim 1 or 2, characterized in that the structure is formed by many axially extending conduits (27, 29, 31), which are disposed in groups and which communicate with one another through conduits (28, 30, 32) extending in the circumferential direction.